



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/558,187	04/26/2000	Jin Li	2000.034000	9865

23720 7590 01/30/2004

WILLIAMS, MORGAN & AMERSON, P.C.  
10333 RICHMOND, SUITE 1100  
HOUSTON, TX 77042

EXAMINER

BRINEY III, WALTER F

ART-UNIT PAPER NUMBER

2644

DATE MAILED: 01/30/2004

3

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/558,187

Applicant(s)

LI ET AL.

Examiner

Walter F Briney III

Art Unit

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 26 April 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 April 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 16 and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 16 recites the limitation "**the second preselected value**" in line 3 of the claim. Claim 23 recites the limitation "**the second preselected value**" in line 3 of the claim. There is insufficient antecedent basis for these limitations. The examiner assumes that the limitation is "**a second preselected value.**"

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Glassman (US Patent 4,277,649) in view of Zhou (US Patent 5,583,934).

Claim 1 is limited to **a method of switch hook detection for a host transceiver**. Glassman discloses hook state monitoring (i.e. **determining a switch hook state...**) for telephone lines (i.e. **of a telephonic device...**) using threshold logic

based on the output of a low-pass filter (i.e. **based on a DC component of the signal**) (i.e. connected to a central processing system) (column 3, line 59-column 4, line 5). Therefore, Glassman discloses all limitations of the claim with the exception of **receiving a signal over a connection from a telephonic device**. Zhou teaches removing sudden DC voltage shifts that cause device saturation in line circuits (i.e. column 1, line 60-column 2, line 13) and does so by first receiving a signal from a telephone line (i.e. **receiving a signal over a connection from a telephonic device**) (column 2, lines 16-25). Zhou measures if the signal **is greater than** a first threshold (i.e. **a first preselected value**) (figure 4, element 414) (column 7, lines 38-62). Zhou includes a switch to vary the output of the accumulator (i.e. **adjusting a transient response time of the host transceiver...**) (column 8, lines 41-56) when the signal is either above or below the first threshold (i.e. **in response to determining that the signal is greater than the first preselected value**) (column 8, lines 11-40). It would have been obvious to one of ordinary skill in the art at the time of the invention to cancel DC transients as taught by Zhou for the purpose of preventing circuit saturation.

Claim 2 is limited to **the method of claim 1**, as covered by Glassman in view of Zhou. Glassman discloses monitoring telephone lines (i.e. **wherein the connection is a subscriber line**) (abstract) and Zhou teaches dealing with the DC signals received from the line (i.e. **the DC component of the signal comprises a signal proportional to a DC current flowing from the subscriber line**) (abstract). Therefore, Glassman in view of Zhou makes obvious all limitations of the claim.

Claim 3 is limited to **the method of claim 2**, as covered by Glassman in view of Zhou. Glassman discloses determining the hook state of a telephone line by filtering out the AC components of the signal with a low-pass filter which inherently delays the input from the output (i.e. **wherein determining the switch hook state of the telephonic device includes waiting a first preselected interval**) (figure 2, element 26) (column 3, line 59-column 4, line 5). Therefore, Glassman in view of Zhou makes obvious all limitations of the claim.

Claim 4 is limited to **the method of claim 3**, as covered by Glassman in view of Zhou. Glassman discloses detecting hook state of a telephone line by comparing an input signal to a DC threshold (i.e. **wherein determining the switch hook state of the telephonic device includes determining if the DC current is greater than a second preselected value**) (figure 2, element 28), where the input signal is the output of the low-pass filter (i.e. **in response to waiting the first preselected interval**) (figure 2, element 26) (column 3, line 59-column 4, line 5). Therefore, Glassman in view of Zhou makes obvious all limitations of the claim.

Claim 5 is limited to **the method of claim 2**, as covered by Glassman in view of Zhou. Zhou teaches comparing an input signal to a first threshold (i.e. **wherein determining if the signal is greater than the first preselected value comprises...**) (figure 4, element 414), where the range of values tested includes saturation (i.e. **determining if a portion of the host transceiver is in a saturation state**) (when  $|V_{GX2}| = \frac{1}{2} G X_{PEAK}$ ). Therefore, Glassman in view of Zhou makes obvious all limitations of the claim.

Claim 6 is limited to **the method of claim 5**, as covered by Glassman in view of Zhou. Zhou teaches adjusting the residual removal of DC by varying the time delay of the accumulator circuit (i.e. **wherein adjusting the transient response time of the host transceiver includes...**) (figure 4, element 416), such that when an input is beyond the first threshold the accumulators time delay is increased (i.e. **increasing a bandwidth of a DC cancellation loop adapted to receive the signal**) (column 8, lines 11-40 and column 10, lines 16-36). Therefore, Glassman in view of Zhou makes obvious all limitations of the claim.

Claim 7 is rejected for the same reasons as claim 6.

Claim 8 is limited to **the method of claim 7**, as covered by Glassman in view of Zhou. Zhou teaches that when the residual DC level is below a third threshold (i.e. the logical inverse of the function  $|IN| \geq 0.2$ ) (i.e. **in response to determining that the signal is less than a third preselected value...**) (column 8, line 65-column 9, line 12) a logic '1' is applied to the AND gate enabling the removal of time delay (i.e. **decreasing the bandwidth of the DC cancellation loop**) (column 8, line 41-56) in the accumulator thus causing a decrease in the residual DC removed by the accumulator. Therefore, Glassman in view of Zhou makes obvious all limitations of the claim.

Claim 9 is limited to **the method of claim 8**, as covered by Glassman in view of Zhou. Zhou teaches that when the input signal is within the acceptable range of the second threshold (i.e. **the third preselected value is an indication...**) (figure 4, element 430), the input is operating within the dynamic range of the receiver (i.e. **that**

**the host transceiver is no longer in the saturation state)** (column 10, lines 31-36).

Therefore, Glassman in view of Zhou makes obvious all limitations of the claim.

Claim 10 is limited to **a method of switch hook detection for a host transceiver**. Glassman discloses receiving an input from a telephone line (i.e. **receiving a signal over a connection from a telephonic device**). Glassman further discloses using a low-pass filter (i.e. **using a low-pass filter...**) (figure 2, element 26) to detect the hook state based on the DC component of the signal (i.e. **to verify a DC component of the signal to determine a switch hook state of the telephonic device**) (Glassman, column 3, line 59-column 4, line 5). For the same reasons as in claim 1, Zhou is incorporated to make obvious DC transient removal. Therefore, Zhou teaches detecting and removing DC transients with a DC level control (i.e. **detecting a transient in the signal using a high-pass filter**) (Zhou, abstract). The low-pass filter not only removes unwanted AC signals but also smoothes the input signal so a **first preselected interval** occurs in the presence of DC transients (i.e. **in response to detecting the transient**) (Glassman, column 3, line 59-column 4, line 5). Therefore, Glassman in view of Zhou makes obvious all limitations of the claim.

Claim 11 is rejected for the same reasons as claim 2.

Claim 12 is limited to **the method of claim 11**, as covered by Glassman in view of Zhou. Glassman discloses a low-pass filter for removal of AC elements, thus smoothing the DC signal as well, the delay of the filter results in a **first preselected interval that is equal or greater than a settling time of the low-pass filter** (column 3,

line 59-column 4, line 5). Therefore, Glassman in view of Zhou makes obvious all limitations of the claim.

Claims 13-20 are essentially the same as claims 1-5 and 7-9, respectively, and are rejected for the same reasons.

Claims 21-27 are essentially the same as claims 1, 2, 4, 5, and 7-9, respectively, and are rejected for the same reasons.

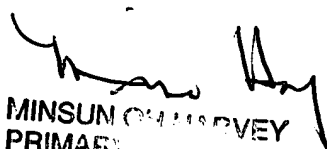
Claim 28 is essentially the same as claim 1 and is rejected for the same reasons.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter F Briney III whose telephone number is 703-305-0347. The examiner can normally be reached on M-F 8am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W Isen can be reached on 703-305-4386. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

  
MINSUN CHAI  
PRIMARY EXAMINER

WFB  
1/22/04